

Amendments to the Claims

This listing of claims will replace the originally filed claims in the application.

Listing of Claims:

Claims 1 – 10 (cancelled)

Claim 11 (new): A method which may be used for treating a liquid bath of oxygen, said method comprising:

- a) providing a liquid bath in the bottom of a cryogenic distillation column or a column element, wherein:
 - 1) said liquid bath comprises at least about 70 mol% oxygen; and
 - 2) said column or column element forms part of a system of columns that are used for the separation of air;
- b) boiling continuously a portion of said liquid bath with at least one first reboiler, wherein said first reboiler is made of aluminum;
- c) purging a portion of said liquid bath, wherein said purging prevents an excessive build up of inflammable impurities in said bath;
- d) sending said purged portion to at least one second reboiler, wherein said second reboiler is less inflammable than said first reboiler;
- e) sending oxygen boiled by said second reboiler back to said column; and
- f) purging a portion of the oxygen rich liquid bath treated by said second reboiler.

Claim 12 (new): The method of claim 11, wherein said purged portion sent to said second reboiler is at least about 0.5 mol% of the total air stream feeding said system of distillation columns.

Claim 13 (new): The method of claim 12, wherein said purged portion sent to said second reboiler is at least about 10 mol% of said total air stream feeding said system of distillation columns.

Claim 14 (new): The method of claim 13, wherein said purged portion sent to said second reboiler is at least about 20 mol% of said total air stream feeding said system of distillation columns.

Claim 15 (new): The method of claim 11, wherein said purged portion of said oxygen rich liquid bath treated by said second reboiler is less than about 1% of the total air stream feeding said system of distillation columns.

Claim 16 (new): The method of claim 15, wherein said purged portion of said oxygen rich liquid bath treated by said second reboiler is less than about 0.2% of said total air stream feeding said distillation columns.

Claim 17 (new): An apparatus which may be used for the cryogenic distillation of air, said apparatus comprising:

- a) a cryogenic distillation column or column element, wherein said column comprises a sump;
- b) at least one first aluminum reboiler for treating an oxygen rich liquid bath, wherein said first aluminum reboiler is located in said sump;
- c) a first purge, wherein:
 - 1) said first purge sends at least a portion of said bath into at least one second reboiler; and
 - 2) said second reboiler is less inflammable than said first reboiler;
- d) a conduit which sends oxygen vaporized by said second reboiler back into said column; and
- e) a second purge, wherein said second purge purges a portion of said bath in said second reboiler.

Claim 18 (new): The apparatus of claim 17, wherein said second reboiler is located at the bottom of a heat exchanger outside of said column.

Claim 19 (new): The apparatus of claim 17, further comprising a partition located in said column, wherein:

- a) said partition divides said sump into a first compartment and a second compartment;
- b) said first reboiler is located in said first compartment;
- c) said second reboiler is located in said second compartment; and
- d) said partition has a height such that said second compartment is fed oxygen rich liquid by overflow from said first compartment.

Claim 20 (new): The apparatus of claim 19, further comprising a measuring device, wherein said device measures the level of said oxygen rich liquid present in said first and said second compartments.

Claim 21 (new): The apparatus of claim 17, wherein:

- a) said column comprising said sump is a low pressure column of a double column;
- b) said double column comprises both said low pressure column and a medium pressure column;
- c) said low pressure and said medium pressure columns are thermally coupled to each other by said first reboiler;
- d) said first reboiler is warmed by a nitrogen enriched gas from said medium pressure column.

Claim 22 (new): The apparatus of claim 21, wherein said second reboiler is warmed by a nitrogen enriched gas from said medium pressure column.

Claim 23 (new): An apparatus which may be used for cryogenic distillation of air, said apparatus comprising:

- a) a low pressure column, wherein said low pressure column comprises a sump;
- b) at least one first aluminum reboiler for treating an oxygen rich liquid bath, wherein said first aluminum reboiler is located in said sump;
- c) a medium pressure column, wherein said medium pressure column is thermally coupled to said low pressure column by said first aluminum reboiler;
- d) at least one partition located in said sump;
- e) at least one second reboiler, wherein:
 - 1) said second reboiler is located in said sump;
 - 2) said partition separates said first reboiler and said second reboiler; and
 - 3) said second reboiler is less inflammable than said first reboiler;
- f) a first purge, wherein said first purge sends at least a portion of said oxygen rich liquid bath to said second reboiler;
- g) a conduit which sends oxygen vaporized by said second reboiler back into said low pressure column;

- h) a second purge, wherein said second purge purges at least a portion of said oxygen rich liquid bath in said second reboiler; and
- i) a nitrogen conduit connecting said medium pressure column with said first reboiler.